

Coherent Scattering and the Flavor Physics and Detection of Supernova Neutrinos

Thursday, 31 May 2018 11:20 (35 minutes)

Coherent elastic neutrino-nucleus scattering ($\text{CE}\nu\text{NS}$) is a neutral-current process in which a neutrino scatters off an entire nucleus, depositing a tiny recoil energy. The process is important in core-collapse supernovae and also presents an opportunity for detection of a burst of core-collapse supernova neutrinos in low-threshold detectors designed for dark matter detection. This talk will discuss the physics of $\text{CE}\nu\text{NS}$, its importance in core collapse, and prospects for supernova burst detection in low-threshold recoil detectors.

E-mail

schol@phy.duke.edu

Primary author: Prof. SCHOLBERG, Kate (Duke University)

Presenter: Prof. SCHOLBERG, Kate (Duke University)

Session Classification: Plenary 6

Track Classification: PNA